What Is Claimed Is:

1. A method for producing a micromechanical component, preferably for fluidic applications having cavities, the component being constructed of two functional layers; the two functional layers being patterned differently using micromechanical methods,
wherein a first etch stop layer (17) having a first pattern is applied to a base plate (2); a first functional layer (3) is applied to the first etch stop layer (17) and to the first contact surfaces (35) of the base plate (2); a second etch stop layer (18), having a second pattern, is applied to first functional layer (3); a second functional layer (19) is applied to the second etch stop layer (18) and to the second contact surfaces (36) of the first functional layer (3); an etching mask (20) is applied to the second functional layer (19); the second and the first functional layer (19, 3) are patterned by the use of the first and the second etch stop layer (17, 18) by etching methods and/or by the use of the first and the second etch stop layer (17, 18) as sacrificial layers.

2. The method as recited in Claim 1,
wherein in conformance with the etching mask (20), the second functional layer (19) is removed down to the second etch stop layer (18); in conformance with the pattern of the second etch stop layer (18), which is used as the second etching mask, the first functional layer (3) is removed down to the first etch stop layer (17).

3. The method as recited in Claim 1,
wherein the base plate is patterned from the underside; and the first etch stop layer (17) is removed in predefined areas as a sacrificial layer in an etching procedure; the predefined

areas extend between the first functional layer (3) and the base plate (2).

4. The method as recited in one of Claims 1 through 3, wherein a lateral limitation of the underetching of the first etch stop layer (17) is achieved by the first functional layer (3), which is situated bordering on the determined areas, in the first contact surfaces (35) on the base plate (2).

5. The method as recited in Claim 2, wherein the first etch stop layer (17) is removed as a sacrificial layer in determined areas via openings in the first functional layer (3).

6. The method as recited in Claim 3, wherein the first etch stop layer (17) is etched away before the patterning of the first functional layer (3) via the openings (33) of the base plate (2); and only after that is the first functional layer (3) patterned from the side of the second etch stop layer (18).

7. The method as recited in one of Claims 1 through 6, wherein an anti-bonding layer (34) is applied to movable parts of the second functional layer (19) or to the corresponding areas of a cover plate (4); and the cover plate (4) is sealingly connected to the upper side of the second functional layer (19), using an anodic bonding method.

8. The method as recited in one of Claims 1 through 7, wherein an anti-bonding layer (34) is applied to the underside of movable parts of the base plate (2), which faces a bottom plate (5), or to the corresponding areas of the bottom plate (5);, and the bottom plate (5) is sealingly connected to the base plate (2), using an anodic bonding method.

9. The method as recited in one of Claims 1 through 8, wherein a layer sequence made up of a lower first silicon oxide layer (21), a middle polysilicon layer (22) and an upper second silicon oxide layer (23) is applied as the first etch stop layer (17).

10. The method as recited in one of Claims 1 through 9, wherein a micropump (1) is produced; after the patterning process of the first and the second functional layer (3, 19), the first etch stop layer (17) is removed in the area of the intake valve (6), the outlet valve (10) and in the area of the pump chamber (8), so that movable parts are formed out of the first functional layer (3).

11. The method as recited in one of Claims 1 through 10, wherein the base plate (2) is patterned from the underside for the development of an inlet channel (7) for the intake valve (6), for the development of an outflow channel (11) for an outlet valve (10), and for the development of a pump chamber (8).

12. A micropump having a pump chamber (8), which is bordered by a cover plate (4) and a pump diaphragm (9), the pump diaphragm (9) being held on a base plate (2); a fluid being able to be sucked in via an intake (6) and being able to be passed out via an outlet (10) by a movement of the pump diaphragm (9),
wherein the pump diaphragm (9) is formed from a polysilicon layer (3).

13. The micropump as recited in Claim 12,
wherein an intake valve (6) is provided as the intake; the intake valve (6) has an inlet channel (7) that is developed in

the base plate (2); the intake valve (6) is developed as a check valve having a first closing element (12); the first closing element (12) is developed as a part of the polysilicon layer (3); the first closing element (12) is situated above an inlet opening of the inlet channel (7) and covers the inlet opening; and as the sealing seat for the first closing element (14), an area of the base plate (2) is provided that surrounds the inlet opening.

14. The micropump as recited in one of Claims 12 or 13, wherein the polysilicon layer (3) has a lesser thickness in predetermined areas, espcially in areas of the intake valve (6), of the outlet valve (10) and/or of the pump diaphragm (9); the polysilicon layer (3) is at a distance from the base plate (2) in the predetermined areas.

15. The micropump as recited in one of Claims 12 through 14, wherein an anti-bonding layer (34) is inserted between a second closing element (13) of an outlet valve (13) of the outlet (10) and a cover plate (2); the cover plate (2) is anodically bonded; and the second closing element (13) is preloaded as a sealing surface by the anti-bonding layer (34) against the cover plate (2).